



PATENT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:

Radoslaw Romuald ZAKRZEWSKI

Appl. No.: 10/803,872

Filed: March 18, 2004

For: **METHOD AND APPARATUS
FOR RANDOMIZED
VERIFICATION OF NEURAL
NETS**

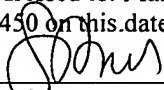
Art Unit: 2129

Examiner: COUGHLAN, Peter D.

Atty. Docket: BFM-02801

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Sandra Rires

TRANSMITTAL OF SUPPLEMENTAL REPLY BRIEF

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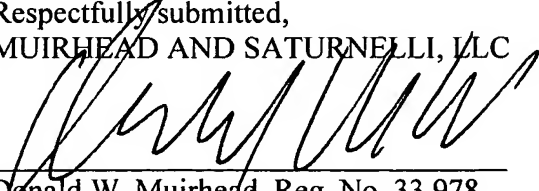
Sir:

Applicant hereby submits the originally-signed Supplemental Reply Brief Under 37 C.F.R. §41.41 with Certificate of Mailing and postcard receipt for the above-referenced patent application.

Although we believe that we have appropriately provided for any fees due in connection with this submission, the Commissioner is authorized to credit any overpayment or charge any deficiencies to/from our **Deposit Account No. 503596**. Two originally-executed copies of this form are being submitted.

Should there be any questions after reviewing this paper, the Examiner is invited to contact the undersigned at 508-898-8603.

Respectfully submitted,
MUIRHEAD AND SATURNELLI, LLC


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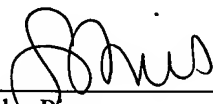


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Sandra Pires

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SUPPLEMENTAL REPLY BRIEF UNDER 37 C.F.R. § 41.41

**SUPPLEMENTING THE REPLY BRIEF FILED ON OCTOBER 3, 2008 AND
SUBMITTED FOLLOWING THE FEDERAL CIRCUIT DECISION OF
IN RE BILSKI DECIDED OCTOBER 30, 2008**

PETITION FOR EXTENSION OF TIME UNDER 37 C.F.R. 1.136(b)

Application Serial No.: 10/803,872

Filed: March 18, 2004

Applicant/Appellant: Radoslaw Romuald ZAKRZEWSKI

Title: METHOD AND APPARATUS FOR RANDOMIZED
VERIFICATION OF NEURAL NETS

Appeal from a decision of the Primary Examiner dated February 1, 2008

Reply to the Examiner's Answer dated August 20, 2008

Atty. Docket: BFM-02801

SUBMISSION OF SUPPLEMENTAL REPLY BRIEF UNDER 37 C.F.R. § 41.41

This supplemental Reply Brief is being submitted under 37 C.F.R. § 41.41 in reply to the Examiner's Answer dated August 20, 2008, and supplements the Reply Brief filed by Appellant on October 3, 2008. This supplemental Reply Brief is being filed following the Federal Circuit Decision of *In re Bilski*, slip op., No. 07-1130, ___F.3d___ (Fed. Cir., decided October 30, 2008). Appellant appeals from the decision of the Primary Examiner dated February 1, 2008, and incorporates by reference herein all necessary portions and arguments set forth in Appellant's Appeal Brief filed on June 12, 2008, and Reply Brief filed October 3, 2008.

If necessary for consideration of this Supplemental Reply Brief, Appellant petitions for an extension of time to respond to the Examiner's Answer under 37 C.F.R. 1.136(b) for the sufficient cause of the *Bilski* decision, that addresses issues of patentable subject matter under 35 U.S.C. 101 relevant to this appeal, having been decided on October 30, 2008. The *Bilski* decision was decided after the due date for the previously-submitted Reply Brief. Appellant submits that the submission of this supplemental Reply Brief has been performed within a reasonable time following the *Bilski* decision as provided under 37 C.F.R. 1.136(b). Appellant submits that in connection with sufficiency of cause for delayed submission of arguments in an appeal, a showing of good cause may be made based upon a recent relevant decision of either the Board or a Federal Court (see, for comparison, 37 C.F.R. 41.52(a)(2)). **The Commissioner is authorized to charge the required petition fee set forth in § 1.17(g) to our Deposit Account No. 50-3596.**

SUPPLEMENTAL ARGUMENTS IN REPLY TO EXAMINER'S ANSWER

Appellant maintains that the Examiner has failed to establish a prima-facie argument that claims 1-36 are directed to non-statutorily patentable subject matter under 35 U.S.C. §101 or lacking patentable utility thereunder.

The *Bilski* decision confirms that determination of the patentability of a process claim under 35 U.S.C. 101 is subject to a "machine-or-transformation" test. The Court held that an applicant may show that a process claim satisfies § 101 either by showing that his claim is tied to a particular machine, or by showing that his claim transforms an article. With respect to the transformation prong, a claimed process is patent-eligible if it transforms an article into a different state or thing. *Bilski*, slip op. at 24.

Appellant's presently-recited invention provides a method for verifying accuracy of a component implemented from a model on the basis of results from at least one test of the component. The method provides for transforming an unverified component implemented from the model into a verified component through verification of the accuracy with which the component has been implemented from the model. Appellants submits that the recited method provides for the transformation of the component (unverified component) into a different state or thing (verified component) according to the recited features and criteria. As previously discussed by Appellant and noted in the specification, the approximation error between the system and a model implemented therefrom may rarely be assessed with certainty and may be expressed in probabilistic terms. Thus, even if an algorithm is deterministically verified against a system model, there may remain a statistical uncertainty

regarding validity of such result, which suggests that the use of a deterministic approach to verification may not be suitable. (See, for example, page 36, lines 1-21 and page 44, lines 1-22 of the originally-filed specification.) Appellant's presently-claimed invention provides for randomized verification of the accuracy of a component implemented from a model based on using test points for a test of the component that are randomly selected. (See, for example, page 43, lines 7-22 of the originally-filed specification). Appellant has found that a randomized verification method may be applicable to a much wider spectrum of practical problems than previously developed for the deterministic verification approach. (See, for example, page 47, line 11 to page 48, line 11 of the originally-filed specification.)

Moreover, Appellant notes that the discussion on pages 25 and 26 of the *Bilski* opinion relating to the application of the "machine-or-transformation" test to the facts presented in the case of *In re Abele*, 684 F.2d 902 (CCPA 1982) are directly applicable to the situation in this case. In *Abele*, a claim reciting that X-ray attenuation data is produced in a two-dimensional field by a computed tomography scanner was indicated as being drawn to patent-eligible subject matter under the "machine-or-transformation" test. In that regard, page 26 of *Bilski* provides, in part, that: "the claim was not required to involve any transformation of the underlying physical object that the data represented."

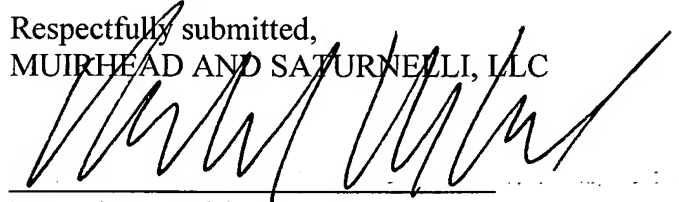
With respect to the rejections of the claims under 35 U.S.C. 101, as lacking utility based on the use of the equations therein, Appellant refers to the arguments previously set forth in the Appeal Brief and the Reply Brief.

Accordingly, Appellant respectfully requests that the Examiner's rejections under 35 U.S.C. 101 be reversed by the Board.

CONCLUSION

In view of the above, and the arguments previously submitted in Appellant's Appeal Brief, it is respectfully requested that the Board reverse all of the Examiner's rejections under 35 U.S.C. 101.

Respectfully submitted,
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